www.airpower.au.af.mil

Eagle of the Yi People

The Story of PLAAF Pilot Yang Guoxiang

Bob Bergin*

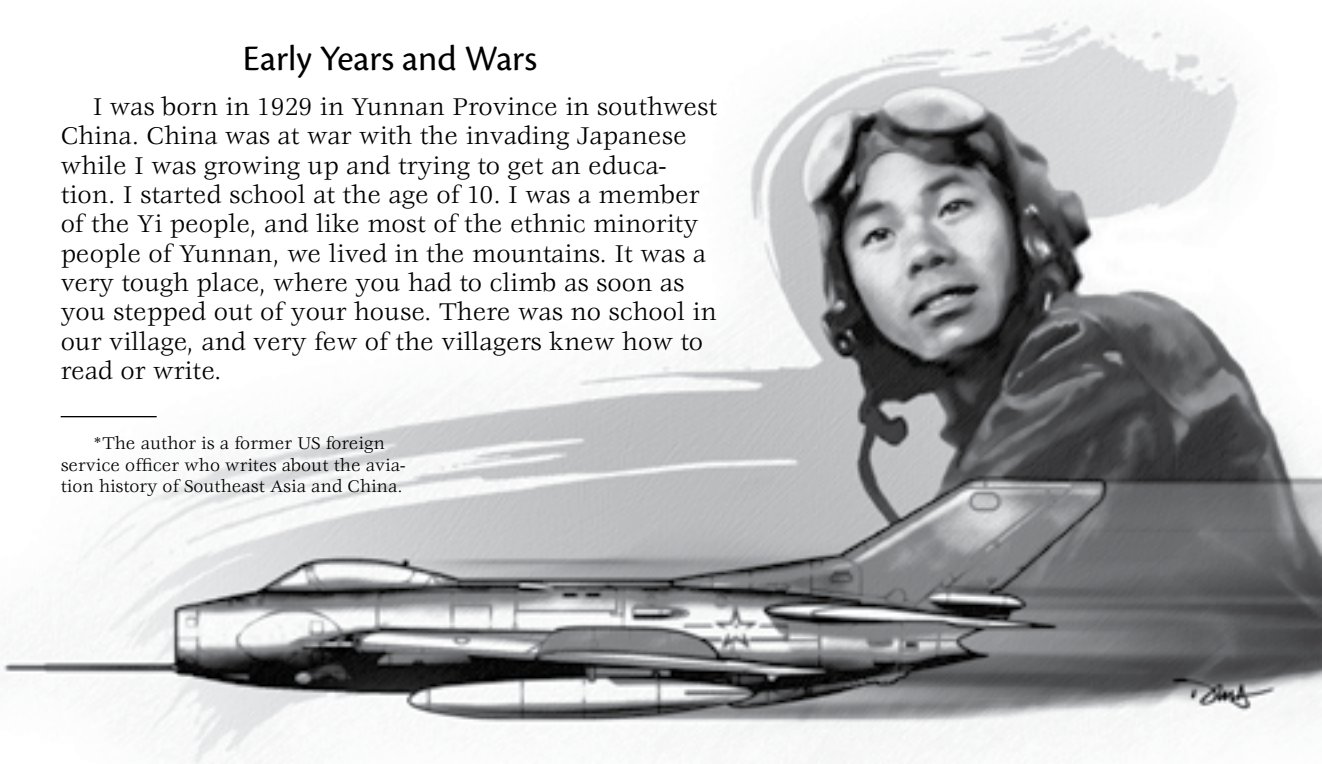
Yang Guoxiang's life mirrors the early years of the People's Republic of China, the rise of the People's Liberation Army Air Force (PLAAF), and China's incredible leap into the nuclear age. Yang was born 81 years ago in the remote mountains of Yunnan Province, a member of the Yi people, one of China's ethnic minorities. He grew up at a time of few opportunities for minorities, particularly in the technical and highly sensitive areas in which he would find himself. He struggled to get an education, becoming a guerrilla and then a soldier in the People's Liberation Army (PLA). He volunteered for flight training and became a ground attack pilot. When China started developing its own supersonic attack aircraft, he was selected as a test pilot, took a lead role in the aircraft's development, and was chosen for a special mission: the first test drop of China's hydrogen bomb. During the 1978 Sino-Vietnamese border conflict, he served as a senior PLAAF commander.

Yang told his story to Bob Bergin, who first traveled to China in 1995 and 1997 with pilots of the American Volunteer Group "Flying Tigers," "officially" visiting China for the first time since World War II. He returned to China regularly thereafter to research US air operations during World War II and, more recently, to explore the early development of the PLAAF through interviews with some of the pilots involved.

Bergin interviewed Yang in Kunming in early 2009 and again in 2010. Yang tells his story in his own words, with the assistance of interpreter Zhao Gang, an instructor at Yunnan University.

Early Years and Wars

I was born in 1929 in Yunnan Province in southwest China. China was at war with the invading Japanese while I was growing up and trying to get an education. I started school at the age of 10. I was a member of the Yi people, and like most of the ethnic minority people of Yunnan, we lived in the mountains. It was a very tough place, where you had to climb as soon as you stepped out of your house. There was no school in our village, and very few of the villagers knew how to read or write.



*The author is a former US foreign service officer who writes about the aviation history of Southeast Asia and China.

My father worked in the tin mines, but he knew it was important to be literate. He urged the villagers to invite a teacher from outside to start a school for our village. They found one who taught the children for their first and second years. In my third year, I went to a bigger school in Eshan County. After that I went to a boarding school in a run-down temple for another three years. When I completed primary school, I was 15.

One day, near my home village in Yixi County, I saw two crashed Japanese bombers. They were on their way to bomb Kunming when they were intercepted by the American Volunteer Group Flying Tigers and shot down. One of the Japanese pilots was still alive, and I watched the Chinese Nationalist Kuomintang (KMT) soldiers search him. They hoped to find a pistol but found nothing. From that incident, I learned that there were Americans in the war who fought alongside the Chinese.

This experience did not have any effect on my becoming a pilot. My family was so poor they could not even afford rice. We lived on a diet of rice chaff and wild vegetables. I could not dream of becoming a pilot.

After finishing primary school, I had to interrupt my education. It was 1944, and the war against the Japanese was in its most difficult phase. The KMT government implemented a forced military draft. If a family had two brothers, one was drafted; if there were three, two were drafted. There were three brothers in my family. As the middle one, I was drafted when I was 15—too young, they decided, so they released me. My older brother worked in a tin mine, and the KMT could not find him. So my father was taken into custody. He was not released until the war against the Japanese ended.

When I turned 17, the legal age to be drafted, I knew I would be drafted again and sent to north China to fight the communists. The soldiers raided my home four times looking for me, but my friends among the sons and daughters of the town officials always warned me, and I was gone when the soldiers came. I knew the local hiding places very well.

Because I was afraid that the KMT soldiers would eventually find me, I ran off and became a migrant worker in Eshan. I lived in a hostel and did any work I could find. I dared not go home. One of my cousins studying at the middle school at Eshan helped me get admitted there, and I found myself in contact with the underground Communist Party.

Some of the teachers were university graduates. They raised my political awareness, and I started to absorb communist ideology. I wrote a little poem that criticized the corruption of the KMT government and posted it on a wall at the school. One of my teachers liked it very much. It happened that he was the secretary of the local Communist Party committee, and that incident led to my joining the party's local democratic youth alliance.

In November 1948, I participated in an armed uprising against the KMT. The party ordered us to retreat to the mountains. It was rough country. The only roads were horse trails, and the few vehicles we had ran on charcoal. We became guerrillas. I was made leader of a small unit tasked with mobilizing local civilians. In 1949 I formally joined the PLA. I was promoted to be the political instructor of the horse-and-mule transportation team of the PLA's Central Yunnan Independent Division.

The People's Liberation Army Air Force and the Korean War

In 1949 the People's Republic of China was founded. The PLAAF was established in the same year. At first the PLAAF had only aircraft that it had captured from the KMT or the Japanese. We had few pilots, so the Air Force set up aviation schools to train our own pilots. Most of the aviation schools were established in the northern part of China.

The PLAAF had been drafting pilots before the founding of the republic, but the start of the Korean War in 1950 accelerated the process. The former Soviet Union gave us aircraft but not pilots. Most of our pilots came from the PLA ground forces. At that time, I was serving in the military command in Yunnan and was one of 1,000 who signed up to join the Air Force. Candidates had to be military officers with combat experience and at least a primary school education, but good physical condition was the most important thing. I was one of only six candidates chosen, and after we were sent to Kunming for health checks, I was the only one remaining.

I was sent to Beijing in February 1950, and from there to the aviation school at Mudanjiang. Most of our instructors were former Japanese prisoners of war who had volunteered to help the PLAAF after the war. We also had former KMT members who had been captured by the PLA and had joined us. Our aircraft were Japanese and American types that remained from the war, like the PT-17 and the Japanese Type 99. Our training lasted just three months before we were sent to operational units. Only a third of the trainees became pilots. The others were sent elsewhere because of their poor performance or poor physical condition. Trainees with quick reflexes were assigned to fly fighter aircraft; the rest were sent to fly transports. When I finished training, I had 70 flight hours.

After graduation I was sent to fly ground attack aircraft, the Russian Ilyushen IL-10, a version of the famous IL-2 "Sturmovik" of World War II, which was also called the "flying tank." I was assigned first to the 22nd Division and later to the 11th Division, which participated in the Korean War.

After the Korean War started, we were sent to northeast China, to Kaiyuan, a city in Liaoning Province. We were ready to deploy across the border into Korea, but the American F-84s destroyed the airport we were to use, so we did not go. We became witnesses to the Korean War. From our base in China, we could see F-86s in the sky. We knew that most of the American pilots had thousands of flying hours while we Chinese pilots had only a few. In terms of experience, the Chinese pilots were children. Their only asset was their courage.

After the Korean War, we modified the MiG-15 to make it suitable for ground attack. Many of the aircraft the Soviets had given us were abandoned because of the short life of their engines. What finally convinced China to develop its own ground attack aircraft was the deterioration of Sino-Soviet relations in 1958. The Soviets withdrew their experts, and Soviet premier Nikita Khrushchev said that without Soviet help, the Chinese Air Force would become a Chinese ground force in three months.

We had great problems. We were short of aircraft and fuel. Most of our airplanes stayed on the tarmac for lack of fuel and spare parts. The lack of fuel meant that Chinese pilots could fly only about 40 hours a year. The recruitment of new pilots was suspended for several years. There were pilot trainees who graduated from flight school without ever touching an airplane. It would take years of arduous work, but China would develop its first military aircraft, a supersonic ground attack aircraft designated the Qiang-5 or Q-5, in Shenyang, the capital of Liaoning Province.

The Q-5

The chief designer of the Q-5 was a former KMT officer, Lu Xiaopeng, who had been sent to the United States in 1945 to study aircraft design and manufacturing. He stayed on the mainland after the KMT evacuated to Taiwan and was appointed chief designer of the Q-5. He used the Russian MiG-19 as his model. He adapted its features to create a ground attack aircraft with much greater range than the MiG. It was an enormous challenge, and he had to make many changes to the orig-

inal design. The fuselage, for example, was completely redesigned.

In 1965 I was one of four pilots chosen to participate in the Q-5 flight tests. I had never flown a supersonic aircraft. To make the transition to the Q-5, I was sent to fly the MiG-19 and then the upgraded MiG-19 attack version. In 1967 we were sent to Tangshan City in Hebei Province to fly the Q-5 and test its performance. In 1966 and 1967, I made over 200 flights in the aircraft. At the end, I prepared a report on the Q-5, its strong points as well as its flaws.

In 1967 a meeting was held in Beijing to discuss the feasibility of producing the Q-5. The meeting was the key to implementing the program, and I was ordered to attend. All concerned departments of the PLA, the national defense industry, and the scientific community were represented; many important people, like the PLA chief of staff, were there.

I was asked to speak. My boss told me not to raise any of the aircraft's flaws but to talk only of its good points. He was eager to move the Q-5 program forward, but I believed that everything we knew about the aircraft—including its flaws—was important. Then the commander in chief of the PLAAF told me to say what I thought; he said I was entitled to do that because I was the guy flying the airplane.

When I spoke, I repeated the issues that I had covered in my written report. Among them were the Q-5's problems, such as those related to the flight controls. The controls were hydraulically activated and responded very slowly to inputs because the hydraulic pressure was too low. That low pressure also made it difficult to retract the undercarriage when the air speed reached 330 kilometers per hour.

The meeting led to the production of the Q-5. Despite the turmoil caused by the Cultural Revolution then under way, the Communist Party of China's Central Committee decided to produce 250 Q-5s. I was appointed director of the Q-5 test-flight panel and named director of the Air Force Scientific Research and Development Department. I was concerned that I would not be able to lead such an important department. I felt I was too junior, but I knew I had good assistants that I could depend on.

Despite our best efforts, the Q-5 program lagged well behind our hopes. It was 1969 before the Q-5 passed all its tests and was declared operational. Although 250 were to be built, in 1969 there were only a dozen. The Air Force had planned to have a flyover of 18 Q-5s on the 20th anniversary of the founding of the People's Republic of China in November 1969, but we had only 12.

In the initial stages of the Q-5 program, there were delays because of factory accidents and the crash of the prototype aircraft. The delays frustrated everyone. The Cultural Revolution impacted the program. At a critical moment, we had a meeting. I spoke for four hours about the importance of developing this aircraft. I set a strict deadline for the more than 400 factories that were involved in the manufacturing process. And I did this in the name of Chairman Mao and the Cultural Revolution. That was how this undertaking proceeded. Premier Zhou Enlai had the final say in the program, and for that I was grateful.

Among the many problems was a mystery. China had imported an entire production facility from England. The British had used the factory to produce engines for a four-engine commercial transport. We wanted to use it to produce the engines for the Q-5 and other aircraft. The factory was being set up in Xi'an, when a huge explosion stopped everything. It was a great mystery. Was there a time bomb in the production line? Did a spy for the British government do this? It remains a mystery to this day. This incident cost the Chinese government hundreds of millions of dollars, and China was in no position to buy another factory to replace the one we lost.

Also at that time, chief designer Lu Xiaopeng was imprisoned. He was suspected of being a spy for Taiwan. His brother had fled to Taiwan with the KMT, and to make everything more complicated,

Yang with MiG-15

Lu had a French wife. In the end, it was Zhou Enlai who helped Mr. Lu get released.

Finally, in December 1969, I made the last operational test flight of this aircraft, and the plant was given formal approval to begin mass production. My work with this project was completed. I was named commander of an operational PLAAF unit, the 19th Division in Shandong.

Testing China's Hydrogen Bomb

During the Q-5's development, other important projects were under way. While we were still in the test-flight stage, the director of the Nuclear Weapon Research Institute came to talk with me about the performance of our aircraft. He spoke of a big, important mission. I really did not know what he wanted, but I started to sense that perhaps our aircraft would be included in some strategic program. He asked me about aircraft that could carry a big bomb, like the H-bomb, which was much bigger than any other bomb we had. I told him the advantages and disadvantages of our different aircraft and said that it might also be feasible to use the Q-5 to drop the H-bomb.

Later, when Zhou Enlai asked the director of the PLAAF Engineering Department about aircraft appropriate for an H-bomb mission, the director recommended the Q-5. With certain modifications, he said, the Q-5 could be used. That led to the question of a pilot qualified to fly the mission. In a regular bomber like the Tu-22, there was a crew of six, but on the Q-5 there was only one man. This man would have to be a highly skilled pilot, totally familiar with the Q-5, and politically acceptable. A report that the Nuclear Weapon Research Institute later sent to the Ministry of National Defense requested that I be named pilot for the mission. At the end of April 1970, I was told that the central government had decided to appoint me as the pilot who would drop the H-bomb.

I was then sent to meet with the director of the Nuclear Weapon Research Institute to be briefed on the H-bomb project and to discuss the Q-5's capability. The Q-5 had limited space inside its fuselage for weapons. The H-bomb was bigger than any other bomb we had: it was two meters long and weighed a ton. We discussed the problem for three days, and in the end decided the bomb could be carried externally. It would be slung under the fuselage—in a semi-recessed bay—and on a mounting that was like two hooks. Later we added a device that would push the bomb out so that it could not collide with the aircraft when we released it. This variant of the Q-5, modified to carry an H-bomb, was designated the Q-5A. Once that was settled, we believed we could drop the bomb by the end of 1970.

The bomb would not literally be dropped but "tossed" at the target. The technique we used was to approach the target at an altitude of 300 meters—to stay below the capability of most radars of the time—and at a speed of 900 kilometers an hour. When the

aircraft was 12 kilometers from the target, we would start a climb at an angle of 45 degrees. At precisely an altitude of 1,200 meters, I would release the bomb.

After the bomb separated from the aircraft, it would continue to climb to 3,000 meters and then start down. As the bomb climbed, it sped toward the target 12 kilometers away. It would take the bomb 60 seconds to reach the target and explode right above it. Meanwhile, as soon as the airplane released the bomb, it reversed course to escape the blast.

It required a very skillful pilot to do this well. Our target zone was 200 meters in diameter, which I could usually strike. Once in about 10 times, I could hit within 50 meters of the center. We had practice bombs that replicated the size and weight of the actual H-bomb but that were made of steel and cement. I dropped practice bombs 200 times.

Then in late 1970, we had a problem with the H-bomb itself. During a test at Lop Nor, the bomb exploded, but the expected atomic reaction did not occur. The H-bomb had failed; the cause would have to be investigated. My work preparing the Q-5A for the mission came to a halt. We had nothing to do at the nuclear weapon test base, so I returned to my unit in Shandong.

The next year, in September 1971, a political event occurred that eventually determined the timing of the H-bomb project. Vice-Premier Lin Biao was killed in an airplane crash while trying to flee to the Soviet Union after a failed coup attempt. There was an upheaval in the PLA, and to raise morale, Chairman Mao decided that we would drop the H-bomb that year.

The date of the mission was kept secret. Very few people knew the exact date that the bomb would be dropped. Once the date was chosen and Chairman Mao had concurred, all personnel at the nuclear site were restricted to base.

The director of the Nuclear Weapon Research Institute took me aside and privately briefed me on how powerful the bomb was and what I could expect when it exploded. He assured me that I would not be in any danger. Because of that and the many practice missions I had flown, I did not feel any different when I carried the live bomb.

On 30 December 1971, weather conditions were good. I took off from the air base in the late morning and headed toward the target, ground zero at Lop Nor, 300 kilometers away. I flew at 900 kilometers per hour and at an altitude of 300 meters, following the procedures we had established. Twelve kilometers from the target, I started my 45-degree-angle climb, and exactly at 1,200 meters I released the bomb.

Nothing happened! The bomb did not separate from the aircraft. The indicators on the panel showed that it was still attached. I turned back toward the target and prepared to do everything again a second time.

We had planned for emergencies. There were three separate release mechanisms, mechanical links to the bomb shackle, of which two were backups in case the first one failed. I tried all three; none worked.

On my second approach, I followed the same procedures, and again the bomb failed to release. I turned to try again. I made a third approach, and for the third time the bomb would not release. The situation was now critical. I was running short of fuel.

Before taking off, I had reviewed our emergency procedures. I had three choices: I could abandon the aircraft by parachute and let it crash in a remote area of the vast desert that surrounded the Lop Nor test site; I could crash-land the aircraft to assure that it was set down in a place where it would harm no one; or I could try to bring the aircraft back to base. I reflected on the time and effort that had gone into the H-bomb project and the great deal of money it had cost the Chinese people, and I made my choice. I would try to bring the airplane and the H-bomb back to base.

There was a great risk in doing this. There were 10,000 people on the air base although only a few knew about the mis-

sion I was on. If anything went wrong, thousands would lose their lives. The bomb under the fuselage would be hanging just 10 centimeters above the ground as I landed.

All radio stations in northwest China had been shut down during my flight, and all flights in the area were banned. I radioed the tower of my decision to return and asked that everyone on the base be evacuated into the tunnels that were dug underneath the base. It was Zhou Enlai who gave the order to evacuate. The deputy commander in chief of the PLAAF asked me whether I had anything else to say on the radio. I could tell him only that I would try my best to get the bomb back safely.

We could not be sure if there was a possibility that the bomb would explode if it contacted the runway during landing. There were five "safeties" that had to be deactivated to enable the bomb to explode. When the bomb was mounted to the airplane, the first safety was released. Fifteen minutes after the aircraft took off, the second safety was released. The third was deactivated when the aircraft reached the target zone. When the pilot decided to drop the bomb, he released the fourth. The fifth and final safety released automatically 60 seconds after the bomb was dropped, an instant before it exploded.

I was confident that I could set the airplane down gently. So I landed with the H-bomb hanging under me. It was a perfect landing. When I shut down the engine, there was total silence; I was completely alone. The airfield was deserted. All 10,000 personnel were sitting in tunnels under the ground. I could not leave the cockpit: there was no ladder for me to climb down from the fuselage that was high above the ground.

I called the tower and asked for help. The tower told me to work my way back to the tail and jump. The people in the control tower were angry; they thought I had put 10,000 lives at risk.

I had caused a big mess. When I notified the tower that I was returning with the bomb, the evacuation siren went off. It was lunchtime at the air base; everyone was sitting down and eating. They had to rush out, put on gas masks, and scramble into the tunnels. A big rice cooker caught fire because there was no one left to take care of the kitchen. Everyone who was there still remembers my name: I could have brought them their judgment day.

> I reflected on the time and effort that had gone into the H-bomb project and the great deal of money it had cost the Chinese people, and I made my choice. I would try to bring the airplane and the H-bomb back to base. . . . If anything went wrong, thousands would lose their lives.

It took a long time for anyone to come near my aircraft. Our procedures for dealing with the H-bomb meant we had to wear rubber shoes and clothing that would not create static electricity. No metal was allowed in the area of the bomb. Now that I had unexpectedly brought the H-bomb back, there were no service vehicles equipped with the required shielding. I sat out on the field for a long while.

After this failure, we sent the release devices to Beijing for analysis. Engineers determined that one reason the shackle malfunctioned was that the mechanism was

carefully kept in a heated area until just before it was mounted on the aircraft. This was not the usual procedure, but since this was the first release of a live bomb, everyone was being especially careful. When the aircraft took off into the cold air, it was possible that the sudden temperature change affected the tolerances on parts of the mechanism, causing its failure to release. The shackles and release mechanism were modified so this could not happen again.

The decision was to go again on 7 January 1972. Wind conditions were optimal. Weather at the Lop Nor site was good, but there was a cold front moving in. It was snowing at the air base when I took off.

This time there was no problem. I followed procedures, and when I released the bomb, it separated from the aircraft as it was supposed to. As soon as the bomb was gone, I reversed course to get far away from the blast zone and activated shields that would protect me in the cockpit. Then I saw the flash, a very big flash. The bomb exploded in the air, at a predetermined height above the ground. I felt the shock wave—it rocked me like a small boat in the ocean—and then I saw the mushroom cloud rising up into the sky. By that time I was already 20 kilometers away from ground zero.

Watching the mushroom cloud from the air, I could see how different layers of clouds inside the mushroom were connected to one another—just like smoke from a chimney. At that moment, I felt very happy. The test had been successful! Then I had to face my new concern—how to land safely on a snow-covered runway.

After I landed, I found little excitement at the air base. Because of the heavy snow, no one there saw anything—neither the great flash of light nor the mushroom cloud that the people near ground zero saw. The people near ground zero were very excited.

At a ceremony celebrating the project's success, I was cited for my contribution to China's nuclear development. Zhou Enlai said that bringing the bomb safely back after the first attempt was a miracle. I was given a high award by the PLA, but at the time it was kept top secret.

Yang Guoxiang

My name was kept secret for another two decades until I was formally acknowledged in 1999, at a conference commemorating the 50th anniversary of "Two Bombs and One Satellite," meaning the atomic bomb, the H-bomb, and an artificial satellite. These were the most important projects undertaken by the PLA after the founding of the People's Republic of China.

War against Vietnam

I went back to fly the Q-5 with operational units, and in late December 1978, when the Vietnamese Army invaded Cambodia, I was the acting commander of the

PLAAF's Fifth Division. Cambodia's ruler, King Norodom Sihanouk, sought refuge in China and asked for China's help.

In order to distract the Vietnamese from their occupation of Cambodia, China decided to escalate the level of conflict that already existed along its southern border with Vietnam, where the Vietnamese Army had been provoking clashes. I was ordered to deploy our entire force of 80 Q-5 ground attack aircraft to the border area.

Our confrontation with the Vietnamese was a major shift in Sino-Vietnamese relations. During Vietnam's war with the Americans, China provided great amounts of assistance to the Vietnamese, particularly to the Vietcong, which helped them liberate the southern part of Vietnam. But once that war ended, Sino-Vietnamese relations deteriorated very quickly. Now, as we faced the Vietnamese troops across our border, we found that they wore our uniforms, carried weapons we had given them, and ate rice that was grown in China.

The older generation of Vietnamese communists had affection for China and its people. They had been given refuge and training in China. Ho Chi Minh had studied at the Chinese military academy in Kunming. But the younger-generation Vietnamese leaders believed themselves much more sophisticated. They did not share their elders' views and had mixed feelings about the Chinese. They bore a grudge because China had cut its aid to Vietnam once the war with the Americans ended.

The border conflict would become a battle between ground armies. Our infantry crossed the border, but the PLAAF did not. Approximately 1,000 PLAAF aircraft were deployed to air bases in Tianyang, Nanning, Suixi, Lianming, and Yanshan. Most of these were Shenyang J-6s (the version of the Soviet MiG-19 built by the People's Republic of China) and the Chengdu J-7 (the version of the Soviet MiG-21 built by the People's Republic of China). Bombers were based in Nanning, Guangxi Province.

My division had two regiments. Within two days, we deployed a total of 80 aircraft, 100 pilots, and 1,000 maintenance and ground support personnel to the border area. All of the aircraft were Q-5s of the latest and most advanced type. We would remain deployed in Guangxi Province for almost five months. During that time, we had no accidents, and none of the Fifth Division's personnel made any serious mistakes. I was later awarded a medal because the division had carried out the mission efficiently.

Our primary mission was to fly reconnaissance along the border to maintain a watch on the Vietnamese Army. We flew our normal reconnaissance patterns at three different levels: at 1,000 meters, at 3,000 to 4,000 meters, and the highest at 10,000 meters. The purpose of using supersonic ground attack aircraft to fly these reconnaissance missions was to bring to the Vietnamese an element of what might now be called "shock and awe." The presence of 80 Q-5s just across their border would give the Vietnamese something to think about; the uncertainty would keep them off balance.

Our flights were routine, and we kept our Q-5s at a distance of 12 kilometers from the border. We never made any aggressive moves toward Vietnamese territory and never crossed into it. We knew, of course, that the Vietnamese were tracking our flights with their radars. We were not concerned about opposition from the Vietnamese Air Force, which was very small. It had a limited number of fighter aircraft, and those were kept in the Hanoi-Haiphong area for the defense of the capital and the seaport. When the Vietnamese saw the scale of the airpower that China could deploy against them, they dared not move aggressively against China in the air.

We arrived at the border with our bombing strategy already worked out and had selected targets in case the conflict escalated. We had no great concern about Vietnamese antiaircraft guns, even if we had been ordered to cross the border. We obviously soon got to know the topography of the border area very well, and we knew the loca-

tions of Vietnamese gun positions. We had a good appreciation of the weapons the Vietnamese used: their antiaircraft guns were all made in China. Nor were we concerned about Vietnamese surface-to-air missiles. They were not widely deployed at that time. We also knew that their range was fairly limited, and we calculated that if we did find ourselves where they were deployed, we could avoid them.

This was a war of infantry. China deployed large numbers of troops in many places along the border. When Chinese infantry drove their attacks into Vietnamese territory, they occupied Vietnamese soil for only short periods of time and then withdrew. The Vietnamese Army's biggest fear was that it could not know where the Chinese Army would launch an attack next. The front line was very long. The Chinese would launch attacks from different points along the border—sometimes from one province, sometimes from another. The Chinese strategy was to distract the Vietnamese from Cambodia, and in that we were quite successful. The Chinese Army tied down 11 Vietnamese divisions along the Chinese-Vietnamese border, making it impossible for the Vietnamese to deploy any more troops to Cambodia.

There was one incident toward the end of our deployment on the border when a Chinese aircraft crossed into Vietnam. It was a MiG-19 from the 18th Division of the PLAAF. I was not involved with the incident but heard about it and the pilot involved. The man was not a highly skilled pilot, and he bore a grudge against his unit because he had not been chosen to participate in the task force that would carry out missions during the engagement with Vietnam. He took off without permission, intending to defect to the Vietnamese. Unfortunately for him, the weather turned very bad. There was heavy rain, and his aircraft crashed off the coast of Vietnam. The pilot was a traitor who tried to carry out an act of revenge against a unit that did not trust his skill. He was killed when he lost control of his aircraft in bad weather. It was poetic justice.

Like other PLAAF commanders, I was under great pressure at the time because I was responsible for the political reliability of each pilot under my command. But I knew my pilots, and I could vouch for them and guarantee that none of them would defect to the other side. ✪

Yang continued to fly the Q-5 until he retired at age 50. After his retirement, he moved back to Yunnan Province and now lives in the provincial capital at Kunming. Q-5A number 11264, in which Yang flew the H-bomb tests, is on display at China's National Air Museum near Beijing. Many other Q-5s continue to serve with the PLAAF, 40 years after the plane's introduction.

Yang had a unique PLAAF career, but in many ways he was representative of the PLAAF's first-generation pilots. They came of age during the Japanese occupation and civil war. Early pilot candidates had to have combat experience with PLA ground forces. Many had little formal education, but they were disciplined and determined to forge careers that would help build an air force and a nation. When their country's Soviet ally abandoned it, they had to develop aircraft and weapons systems while making the best of diminishing resources. Despite that situation and political circumstances that did not encourage innovation or initiative, Yang and his contemporaries built the PLAAF into a modern air force.